

Applicants: Soderlund, H. *et al.*
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Gmt*

the target nucleic acid polymer flanking the 3' end of the predetermined position, such that the oligonucleotide detection primer, when hybridized to the target nucleic acid polymer, forms an oligonucleotide detection primer extension product by an enzyme catalyzed chain extension nucleic acid polymerization that adds to the oligonucleotide primer the labelled nucleotide complementary to the specific nucleotide at the predetermined position in the target nucleic acid polymer in the presence of the polymerizing agent.

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§ 2
C 2*

52. [Amended] A reagent kit according to Claim 51, wherein the oligonucleotide detection primer comprises an attachment moiety.

53. [Amended] A reagent kit according to Claim 51, wherein the oligonucleotide detection primer has a length of from 10-40 nucleotide residues.

54. [Amended] A reagent kit according to Claim 51 having the sequence 5'-GCG
CGG ACA TGG AGG ACG TG-3'.

55. [Amended] A reagent kit according to Claim 51 having the sequence 5'-ATG
CCG ATG ACC TGC AGA AG-3'.

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56. [Amended] A reagent kit according to Claim 51 having the sequence 5' -GTA

Subj. CTG CAC CAG GCG GCC GC-3'.

Subj 57. [Amended] A reagent kit according to Claim 51 having the sequence 5'-GGC

C 2 CTG GTA CAC TGC CAG GC-3'.

Cont 58. [Amended] A reagent kit according to Claim 51 having the sequence 5' -CAT

GGT GCA CCT GAC TCC TG-3'.

Subj. 59. [Amended] A reagent kit according to Claim 51 having the sequence 5' -CAG

Subj TAA CGG CAG GCG GCC GC-3'

60. [Amended] A reagent kit according to Claim 51 having the sequence 5' -AAG

GCA CTC TTG CCT ACG CCA-3'.

61. [Amended] A reagent kit according to Claim 51 having the sequence 5' -AGG

CAC TCT TGC CTA CGC CAC-3'.

Subj. 62. [Amended] A reagent kit according to Claim 51 having the sequence 5' -AAC

Subj 5

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TTG TGG TAG TTG GAG CT-3'.

63. [Amended] A reagent kit according to Claim 51 wherein the oligonucleotide detection primer is immobilized to a solid support.

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cont 64. [Amended] A reagent kit according to Claim 51 wherein the labeled nucleotide is a deoxyribonucleotide triphosphate.

(65.) 65. [Amended] A reagent kit according to Claim 51 wherein the labeled nucleotide is a chain terminating nucleotide.

66. [Amended] A reagent kit according to Claim 65 wherein the labeled nucleotide is a dideoxyribonucleotide triphosphate.

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7/6 67. [Amended] A reagent kit according to Claim 51 wherein the oligonucleotide primer extension product is immobilized to a solid support.

C 3 68. [Amended] The reagent kit according to claim 51 further comprising a double stranded hybrid wherein the oligonucleotide primer is hybridized to the target nucleic acid polymer immediately adjacent to the predetermined position.

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69. [Amended] An oligonucleotide detection primer extension product comprising:
an oligonucleotide detection primer having a nucleotide sequence complementary
to and capable of hybridizing to a region [in the] of a target nucleic acid polymer flanking the 3'
end of a predetermined position, wherein the sequence between the 3' end of the oligonucleotide
detection primer and the specific nucleotide at the predetermined position in the target nucleic
acid polymer does not contain a nucleotide residue of the same type as the specific nucleotide at
the predetermined position in the target nucleic acid polymer, wherein said oligonucleotide
detection primer has been extended by an enzyme catalyzed chain extension nucleic acid
polymerization that adds to the oligonucleotide detection primer a labeled nucleotide
complementary to the specific nucleotide at the predetermined position in the target nucleic acid
polymer [in the presence of a polymerizing agent].

REMARKS

The Examiner has rejected claim 68 under 35 U.S.C. §112, first paragraph, for not
providing support in the specification for a double stranded hybrid. It is respectfully submitted
that double stranded hybrids are taught throughout the specification. For example, the Examiner
is directed to figure 1, where it is demonstrated that the double stranded hybrid includes the target
nucleic acid hybridized to a primer.